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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/724,843  
Filing Date: December 01, 2003  
Appellant(s): BHANU ET AL.

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BHANU ET AL.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/14/2008 appealing from the Office action mailed 03/27/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

2003/0060222	Rune	09-2001
7,193,989	Melpignano	04-2002

2003/0124978	Virtanen	12-2002
2003/0092386	Miklos et al.	10-2001
6,879,570	Choi	09-2000

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 2, 4-11, 13-18 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of

**Melpignano (Patent no.: US 7,193,989 B2)** and **Virtanen (PGPUB: US 2003/0124978 A1)**.

With respect to **claim 1**, Rune teaches a system for discovering and connecting to a remote device by a local device, the system comprising tangible computer-readable media having:

an inquiry scan cache that is refreshed by a periodic inquiry scan (Rune, page 2, paragraph 30, noted that it is an inherent feature for inquiry scan transceiver to have a cache);

a page scan cache (Rune, page 3, paragraph 32, noted that it is an inherent feature for page scan transceiver 530 to have a cache); and

a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

However, Rune does not explicitly teach a method of refreshing the page scan by way of an attempt to connect to at least one remote device and a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

In the same field of endeavor, Melpignano teaches a method of refreshing the page scan by way of an attempt to connect to at least one remote device (Melpignano: col. 10, lines 45-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of refreshing the page scan by way of an attempt to connect to at least one remote device as taught by Melpignano in Rune's invention in order to for a Bluetooth device to establish one or more connections

as quickly as possible when entering an unknown environment (Melpignano: col. 10, lines 60-63).

However, the combined method of Rune and Melpignano does not explicitly teach a method of providing a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan.

In the same field of endeavor, Virtanen teaches a method providing a list of visible remote devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local device successfully contacts by way of a page scan (Virtanen: fig. 2, 4-5, page 2, paragraphs 20-21, page 3, paragraphs 32-33).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of providing a list of visible remote devices as taught by Virtanen in the combined method of Rune and Melpignano invention in order to provide a visible list of devices within the vicinity of user's device (Virtanen: page 3, paragraph 32).

With respect to **claim 2**, Rune teaches the system of claim 1 wherein the remote device provides a Network Access Point (NAP) service (Rune, page 3, paragraph 32).

With respect to **claim 4**, Rune teaches the system of claim 1, further comprising an automatic configuration service component that polls for the list of visible remote devices and the page scan is performed in response to the configuration service polling for the list (Rune, page 3, paragraph 37, noted polling the slave unit).

With respect to **claim 5**, Rune teaches the system of claim 1 wherein the page scan cache holds a finite number of entries and is associated with an expiration policy (Rune, page 3, paragraph 37).

With respect to **claim 6**, Rune teaches the system of claim 1 wherein the inquiry scan cache is additionally updated by way of an attempt by a remote device to connect to the local Bluetooth device (Rune, page 2, paragraph 31 and page 3, paragraph 37).

With regard to **claims 7 and 8**, the limitations of these claims are substantially the same as those in claim 1. Therefore the same rationale for rejecting claim 1 is used to reject claims 7 and 8. By this rationale **claims 7 and 8** are rejected.

With respect to **claim 9**, Rune teaches the method of claim 7 wherein the page scan cache holds a finite number of entries, the method further comprising, for each entry added to the page scan cache:

setting an expiration time for the entry (Rune, page 3, paragraph 37);

if the periodic inquiry scan does not reveal the entry, reducing the expiration time (Rune, page 1, paragraph 11); and

if the expiration time has occurred, removing the entry from the page scan cache (Rune, page 1, paragraph 11).

With respect to **claim 10**, Rune teaches the method of claim 7, further comprising:

if a remote device attempts to connect to the local device, adding an entry for the remote device to the inquiry scan cache (Rune, page 3, paragraph 33, noted that after

obtaining the information the Bluetooth roaming device may transmits to the page scan transceiver).

With respect to **claim 11** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 11. By this rationale **claim 11** is rejected.

With respect to **claim 13**, Rune teaches the method of claim 7 wherein forming a list of visible remote devices is in response to polling by an automatic configuration service (Rune page 3, paragraph 37, polling the slave unit).

Regarding **claims 14 and 15**, the limitations of these claims are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claims 14 and 15. By this rationale **claims 14 and 15** are rejected.

Regarding **claim 16** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 16. By this rationale **claim 16** is rejected.

Regarding **claim 17** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 17. By this rationale **claim 17** is rejected.

Regarding **claim 18** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claim 18. By this rationale **claim 18** is rejected.



Regarding **claim 21** the limitations of this claim are substantially the same as those in claim 4. Therefore the same rationale for rejecting claim 4 is used to reject claim 21. By this rationale **claim 21** is rejected.

4. **Claims 3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of **Melpignano (Patent no.: US 7,193,989 B2)** and **Virtanen (PGPUB: US 2003/0124978 A1)** and further in view of **Miklos et al. (publication no.: US 2003/0092386 A1)**.

With respect to **claim 3**, the combined method of Rune, Melpignano and Virtanen teaches all the claimed limitations, except that they do not explicitly teach a method of providing a Group Ad-hoc Network (GN) service.

In the same field of endeavor, Miklos teaches a method of providing a Group Ad-hoc Network (GN) service (Miklos, page 2, paragraph 22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of providing a Group Ad-hoc Network (GN) service as taught by Miklos in the combined method of Rune, Melpignano and Virtanen invention in order to allow the peer-to-peer characteristics of the network and offer location-based services that address specific communities of users.

With respect to **claim 12** the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 12. By this rationale **claim 12** is rejected.

5. **Claims 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of **Melpignano (Patent no.: US 7,193,989 B2)** and **Virtanen (PGPUB: US 2003/0124978 A1)** and further in view of **Choi (patent no.: US 6,879,570 B1)**.

With respect to **claim 19**, the combined method of Rune, Melpignano and Virtanen teaches all the claimed limitations, except that they do not explicitly teach a method of providing a user-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a user-mode Bluetooth PAN service component (Choi, col. 3, lines 25-42).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method providing a user-mode Bluetooth PAN service component as taught by Choi in the combined method of Rune, Melpignano and Virtanen invention in order to check whether other Bluetooth devices are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-63).

With respect to **claim 20**, the combined method of Rune, Melpignano and Virtanen teaches all the claimed limitations, except that they do not explicitly teach a method of providing a kernel-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a kernel-mode Bluetooth PAN service component (Choi, col. 3, lines 43-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method providing a kernel-mode Bluetooth

PAN service component as taught by Choi the combined method of Rune, Melpignano and Virtanen invention in order to check whether other Bluetooth devices are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-63).

## **(10) Response to Argument**

### **General arguments with respect to rejections of claims**

#### **Subsection 1:**

6. On pages 10 paragraphs 2-3 of Appellant's Brief, Appellant argues that none of the cited references shows a page Scan Cache as claimed, and further argues that it is not an inherent feature for the page scan transceiver of Rune to have a cache.

In response to Appellant's argument, the examiner disagrees. The general definition of "cache" is "a block of memory for *temporary storage of data* likely to be used again." as defined by the Wikipedia website. Therefore, in the instant case of Rune, the page scan transceiver as taught by Rune is a Bluetooth device (Rune: page 2, paragraph 30), wherein the page scan transceiver inherently has temporary storage feature in storing data received for the page scan transceiver; such as *registers*, the lowest level architecture structure of an electronic device, which temporary stores data for the page scan transceiver. Therefore, Appellant's argument is deemed not persuasive.

7. On pages 10 paragraph 4 of Appellant's Brief, Appellant argues that Melpignano fails to remedy the deficiency of "refreshing the page scan cache by way of an attempt

to connect to at least one remote device.", and further argues that "Though the Examiner asserts that limitations relating to refreshing the page scan cache are met by Melpignano at col. 10, lines 45-63, that passage at most teaches that a page scan is performed. It does not follow that results of such a page scan are stored in a cache or that the cache is subsequently refreshed by way of an attempt to connect to a remote device."

In response to Appellant's argument, the examiner disagrees. The presently recited claim does not require the results of a page scan are permanently stored in a cache. In fact, the results of the scan are temporarily stored in the cache as evident by the definition of the "cache" above. In the case of Melpignano, "the mobile terminal MT<sub>1</sub> sequentially pages each of the candidates..." (Melpignano: col. 10, lines 48-49), noted that when the page scan sequentially searches for candidates, the results are at least temporarily stored. Therefore, Appellant's argument is deemed not persuasive.

#### **Subsection 2:**

8. On pages 11 of Appellant's Brief, Appellant argues that "the rejections are all premised on an inadequate reason for combining disparate references.", and further argues that "Being in the same field of endeavor is not an adequate reason for combining bits and pieces of different systems described in different references."

In response to Appellant's argument, the examiner disagrees. It appears that Appellant is paraphrasing the MPEP 2143 by only citing MPEP 2143 (f) in supporting Appellant's rationale and in an attempt to prove examiner's errors for combination of references.

Accordingly, the examiner would like to point out that MPEP 2143 also stated that "(A) Combining prior art elements according to *known methods to yield predictable results*; (B) Simple substitution of one known element for another *to obtain predictable results*; (C) Use of known technique *to improve similar devices* (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) *ready for improvement to yield predictable results*; (E) "*Obvious to try*" – choosing from a finite number of identified, predictable solutions, *with a reasonable expectation of success*; (G) *Some teaching, suggestion, or motivation in the prior art* that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." (emphasis added). It is clearly shown above, it is reasonable and sufficient for one of ordinary skilled in the art at the time of invention to combine these references as long as there's some teaching or suggestion or motivation in the prior art with known elements and techniques to improve a similar device (methods, or products) to obtain predictable results.

In addition, the Supreme Court has held that "a patent for a combination which only unites old elements with no change in their respective functions...obviously withdraws what is already known into the field of its monopoly and diminishes resources available to skillful men...The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 2007 U.S. LEXIS 4745, (U.S. 2007).

Furthermore, "Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary

skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...the fact that a combination was obvious to try might show that it was obvious under section 103." *KSR Int'l Co. v. Teleflex Inc.*, 2007 U.S. LEXIS 4745, (U.S. 2007).

When a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious. *Sakraida v. AG Pro, Inc.*, 425 U.S. 273 (1976).

**Appeal argues claims 1, 2, 3, 8 and 15**

9. Appellant's main arguments toward these claims are relied upon the arguments addressed subsection 1. Furthermore, with regard to the argument toward Virtanen reference, in which Appellant argues that "the application of Virtanen is that the telephone directory of Virtanen is not used to form a list as claimed". The examiner disagrees with this argument. Virtanen discloses forming a complete list of detected Bluetooth devices by concatenating the lists collected by the inquiry scan and page scan transceivers (Virtanen: page 2, paragraphs 20-21, page 3, paragraphs 32-33), and fig. 5A-5B explicitly shows the complete list of Bluetooth devices displayed to the user. Therefore presently claimed invention is not patentable over Rune in view of Melpiganano and Virtanen.

**Appeal argues claims 7, 11 and 12**

10. Appellant's main arguments toward these claims are relied upon the arguments addressed in subsection 1 and claim 1 above.

11. In addition, Appellant also argues that "the references also do not describe updating such a cache in response to an attempt to connect to a remote device". The examiner disagrees. Claim 7 recites "*prior to receipt of a request* for the list of visible remote devices: updating an inquiry scan cache by way of a periodic inquiry scan" (emphasis added). The broadest reasonable interpretation of "prior to receipt of a request" also implies that the device was under the manufacture default condition, wherein the device was still not yet activated and the temporary storage device (i.e registers) were still in the null state. Therefore, upon activating the device and performing the very first inquiry scanning would update the temporary storage. Therefore presently claimed invention is not patentable over Rune in view of Melpiganano and Virtanen.

12.

**Appeal argues claim 14**

13. Appellant's arguments toward this claim are relied upon the arguments addressed in subsection 1 and claim 1 above. Therefore presently claimed invention is not patentable over Rune in view of Melpiganano and Virtanen.

**Appeal argues claims 18-21**

14. Appellant's arguments toward these claims are relied upon the arguments addressed in subsection 1 and claim 1 above. Therefore presently claimed invention is not patentable over Rune in view of Melpiganano and Virtanen.

**Appeal argues claims 4-6, 9-10 and 16-17**

15. Appellant's arguments toward these claims are relied upon the arguments addressed in subsection 1 and claim 1 above. Therefore presently claimed invention is not patentable over Rune in view of Melpiganano and Virtanen.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/L. L./

/Lin Liu/

Examiner, Art Unit 2445

Conferees:

/Jason D Cardone/  
Supervisory Patent Examiner, Art Unit 2445  
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